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(54) Exhaust gas catalytic purifier construction.

(57) Method of forming a catalytic bonding layer by chemical vapor deposition (CVD) onto carrier structures including internal combustion engine exhaust system and catalytic converter components, in order to bond a catalyst layer thereto, thereby providing a structure wherein additionally the bonding layer can be energized to promote catalytic conversion-activating preheating of the catalyst. In an electromagnetic induction catalytic preheating system, a ceramic lattice or a metallic network can form the base structure of the catalytic converter, wherein at least the

latter is encompassed by an electrical/thermal insulating layer; around either induction coiling is wrapped and secured by a thermally insulating material. Upon engine start, current is electromagnetically induced in the catalytic bonding layer or the metallic network through the induction coiling. Furthermore, the specific heat capacity of the bonding layer is low, and its specific resistance can be predetermined; thus in heating quickly and efficiently, in tandem the catalyst is heated. The catalytic preheating is also made efficient by the insulating properties

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EUROPEAN SEARCH REPORT

Application Number
EP 93 10 9396

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X	FR-A-2 316 906 (MONTEDISON)	1,2,11, 12,34,35 7,8	B01J37/02 F01N3/20 B01D53/36
A	* page 2, line 3-4; claims * * page 3, line 34 - page 4, line 6 * * page 5, line 1-5 * * page 6, line 12 - line 25 * * page 7, line 4-11 * * page 7, line 32 - line 37 *		
A	EP-A-0 149 318 (CORNING GLASS WORKS) * page 7, line 4-18; claims 1,2 *	1,2,4,6, 11,12,17	
P,A	WO-A-92 14547 (THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) 3 September 1992 * page 6, line 34 - line 35 *	2,3	
A	EP-A-0 198 435 (BASF)		
A	EP-A-0 283 910 (W.R. GRACE & CO)		
A	US-A-3 998 758 (R. A. CLYDE)		
X	US-A-3 581 489 (SUN OIL COMPANY) * the whole document *	20	
A		45	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 29 June 1994	Examiner Bogaerts, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		F : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 (01/87) (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid.
- namely claims:
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions.

namely:

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- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid.
- namely claims:
- ☐ None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims.
- namely claims:



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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-19: Exhaust gas catalytic purifier of a motor vehicle combustion engine exhaust system comprising:.....
2. Claims 20-33: The same incorporating an exhaust passage comprising:.....
3. Claims 34-53: Method of fabricating an exhaust gas catalytic purifier of an internal combustion engine exhaust